Some Questions

- Small and Medium Size Plants-do they produce Biosolids?
- Where has it been going?
- Does it matter?
- What will be the trend in the future for wastewater Treatment?
- What are the options for managing the by-products or biosolids.
Wastewater Treatment Process
Biosolids Management Practices

- Incineration
- Direct land application following anaerobic digestion.
- Landfilling.
- Alkaline stabilization and land application.
- Pelletizing for fertilizer or for fuel.
- Separate storage in lagoons.
- Storage in aerated lagoons and dredging.
- Composting.
The Challenge for Lagoon Systems

- Sludge accumulates unseen and unbudgeted.
- Sludge accumulation on an expensive aeration system poses additional challenges.
- Dredging difficult with aeration.
- No local infrastructure or contractors equipped and experienced.
- Expansion of a lagoon system may not be feasible.
- Siting of a new lagoon system may not be publicly acceptable or environmentally feasible.
Challenges and Opportunities with Small to Medium Size Wastewater Treatment Plants

- Trend may be for more compact treatment systems.
- Design should be more modular and repeatable.
- Not taking enough advantages of successful designs.
- This treatment plant design approach will result in Biosolids produced daily.
- Will need more compost operations able to handle it.
- Difficult for small to medium size municipalities to site, design or manage composting and associated feedstocks.
- Compost system will need to be more modular and repeatable.
Biosolids Production and Handling
Modular Composting System
Acceptance of the Compost by the Public
Goals

Conduct a targeted sampling program at selected representative wastewater treatment plants to provide a focused Canadian study and an inventory of ESOC in Canadian biosolids.
Value of Compost in GHG reduction

• The Compost Facility currently represents a 68% reduction in GHG’s to the overall operation. Will be 53% in 2021 once secondary treatment is commissioned. Net GHG emissions will rise from 0.73 KtCO2eq to 2.30 KtCO2eq
## Historical Community Compost Demand

<table>
<thead>
<tr>
<th>Compost Clientele (tonnes)</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Public pick-up bins</td>
<td>2,880</td>
<td>4,000</td>
<td>3,696</td>
<td>4,000</td>
<td>5,750</td>
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<tr>
<td>Commercial users</td>
<td>280</td>
<td>515</td>
<td>160</td>
<td>960</td>
<td>1,000</td>
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<tr>
<td>City of Moncton</td>
<td>1,464</td>
<td>42</td>
<td>535</td>
<td>800</td>
<td>40</td>
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<td>City of Dieppe</td>
<td>192</td>
<td>1,009</td>
<td>26</td>
<td>200</td>
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<tr>
<td>Town of Riverview</td>
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<td>16</td>
<td>34</td>
<td>96</td>
<td>150</td>
<td>60</td>
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<tr>
<td>Community projects</td>
<td>128</td>
<td>128</td>
<td>24</td>
<td>400</td>
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<tr>
<td>Trials/tests/promotional</td>
<td>360</td>
<td>680</td>
<td>600</td>
<td>400</td>
<td>200</td>
<td>150</td>
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<tr>
<td>Miscellaneous/TransAqua</td>
<td>320</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>200</td>
<td>200</td>
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<tr>
<td>Annual compost output totals</td>
<td>5,752</td>
<td>6,790</td>
<td>5,476</td>
<td>7,256</td>
<td>7,600</td>
<td>7,400</td>
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<tr>
<td>End of Season Inventory</td>
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<td>1,750</td>
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<td>100</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>3,000</td>
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</table>
Thank You / Merci

Questions?